VIRGINIA'S

WATERSHED PLANNING PROCESS

for

WATER QUALITY MANAGEMENT

(A Continuing Planning Process)

COMMONWEALTH OF VIRGINIA

Department of Environmental Quality
in Cooperation with the
Department of Conservation and Recreation
And other State Agencies

January 2000

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ACRONYMS

CBLAD Chesapeake Bay Local Assistance Department

CBPA Chesapeake Bay Preservation Act CPP Continuing Planning Process

CWA Clean Water Act

CZARA Coastal Zone Act Reauthorization Amendments
DCR Department of Conservation and Recreation
DEQ Department of Environmental Quality

DEQ Department of Environmental Quality
DMME Department of Mines, Mineral and Energy

EPA Environmental Protection Agency SWAP Source Water Assessment Program

SWCB State Water Control Board TMDL Total Maximum Daily Load

VDACS Virginia Department of Agriculture and Consumer Services

VDH Virginia Department of Health

VMRC Virginia Marine Resources Commission

VPDES Virginia Pollutant Discharge Elimination System Permit

WQMP Water Quality Management Plan

1.1 Requirements for Continuing Planning Process

Section 303(e) of the Clean Water Act (CWA), and the Environmental Protection Agency•s (EPA) implementing regulations at 40 CFR • 130.5 require each state to submit to the EPA a Continuing Planning Process (CPP) document.

The CPP is a document that explains the state's process for implementing federal and state laws and regulations on water quality. The CPP describes the process for developing and updating the contents, uses or purpose, implementation requirements, agencies involved, and public participation requirements of the state's water quality management programs.

Virginia submitted the original state CPP to the EPA on February 15, 1973. The plan was approved by the EPA Region III Administrator on September 12, 1973. Since then two more CPP•s were submitted to the EPA, one in 1983 and another in 1987. Several changes have occurred since the last program update, both on the federal and state levels, with the passing of new laws and regulations. This document describes these new programs and other related changes and updates the existing CPP.

1.2 CPP Purpose and Organization

Virginia •s CPP provides a record of the processes the State uses to administer its water programs and to develop plans to improve, protect and maintain the quality of the Commonwealth •s waters. The CPP is meant to explain and describe how Virginia manages water quality and how water quality decisions are made.

Section 303 (e) of the Clean Water Act, with its provisions for continual program planning, outlines a comprehensive and integrated approach to watershed management. Section 303 (e) requires that states have a continuing planning process for all navigable waters. Among other things, plans are to include effluent limits and incorporation of total maximum daily loads (TMDL) for pollutants, schedules for compliance with effluent limits, provisions for intergovernmental cooperation, and adequate assurance for implementation, including schedules of compliance.

Following are the descriptions of the remaining sections of the CPP:

Section 2 gives an overall view of Virginia •s water quality management process, how the CPP is implemented, and identifies the different groups responsible for carrying out the planning process.

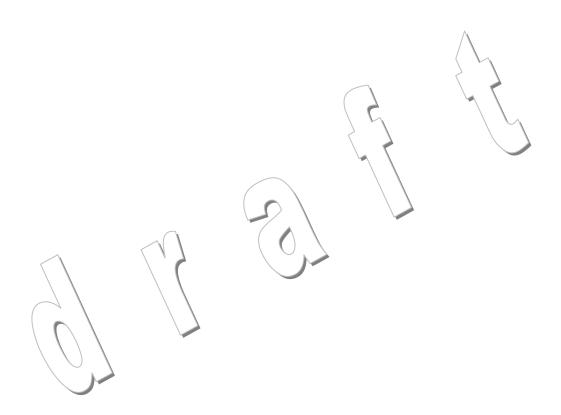
Section 3 discusses in detail how Virginia plans to address all nine elements required by the CWA to be included in the CPP.

Section 4 includes the Appendices that list the technical support documents referenced in the CPP, the regulations, programs and activities implemented by state agencies in support of the CPP, and contacts for the cooperating state agencies. A short description of the content and utility of each document is

included, where applicable. In cases where the document is published periodically [e.g., the 305(b) and 303(d) reports), the referenced document is the latest version. For procedure manuals, guidance, and Memoranda of Understanding/Agreement, the referenced documents would be the latest revisions or updates, where applicable.

Sections 5 are a glossary of key words used in the CPP documents.

Section 6 records Virginia • s submittal and EPA • s review of the CPP.



2.1 Authorities for State Water Quality Management

The Clean Water Act (CWA) is the primary source of major federal authorities for many of Virginia's water quality programs. The EPA has delegated to Virginia many of these programs. The State Water Control Law is the main source of state authority in carrying out federal programs; however, Virginia has enacted several laws that affect the state's water quality. Following is a list of federal and state legislation that address water quality.

Federal Legislation

Clean Water Act (CWA)

- X •208 Areawide Waste Treatment Management
- X •303 Water Quality Standards and Implementation Plan
- X •305 Water Quality Inventory
- X •319 Nonpoint Source Management Programs
- X • 401&404 Water Quality Certification and Permits for Dredged and Fill Materials
- X •402 National Pollutant Discharge Elimination System
- X Coastal Zone Act Reauthorization Amendments (CZARA)
- X 6217- Coastal Nonpoint pollution Control Programs

State Legislation

- X State Water Control Law (SWCL) •62.1-44.2, et seq. of the Code of Virginia (Code)
- X Chesapeake Bay Preservation Act (CBPA) •10.1-2100, et seq. of the Code Erosion and Sediment Control Law (E&SCL) •10.1-560, et seq. of the Code Storm Water Management Law (SWML) •10.1-603.2 through 10.1-603.15 of the Code
- X Virginia Water Quality Improvement Act of 1997 (WQIA) •10.1-2117 through 2134) of the Code
- X Watershed Planning and Permitting Promotion and Coordination ●10.1-1193 through 1197 of the Code.

Appendix 4.5 lists the regulations, programs and activities that Virginia has developed to implement the above state legislations.

2.2 Implementation of the CPP

The Continuing Planning Process in Virginia is implemented in various state programs, all aimed toward achieving and maintaining the state water quality standards. The Virginia CPP is graphically depicted in Figure 1.

Figure 1. Continuing Planning Process



Virginia Code Section 62.1-44.15(10) & (13), 62.1-44.17:3, and 62.1-44.19:7 give the Virginia State Water Control Board (Board) the duty and authority to conduct the CPP in Virginia. Under the authority of Virginia Code Section 10.1-1183, the Virginia Department of Environmental Quality (DEQ) serves as the administrative arm of the Board. The Board is charged with formulating and implementing policies to assure the proper use and management of the Commonwealth's water resources. In addition many other state agencies have been given similar responsibilities. To accomplish this mission of proper use and management of Virginia's water resources, water quality management efforts are integrated so that existing high quality waters are maintained, and the quality of others is improved.

Table 2.2 lists the various state water quality management programs with the implementing state agencies. More information regarding specific programs administered by the agencies may be obtained by directly contacting the agencies at the addresses included in Appendix 4.1 of this document.

Sections 2.2.1 through 2.2.5 explain the continuing planning process in Virginia, as depicted in Figure 1.

2.2.1 Water Quality Standards

The planning process is driven by water quality standards (WQS), which are provisions of State or federal law that consists of a designated use or uses for the waters of the Commonwealth and water quality criteria for such waters based upon such uses. WQS may be narrative or numeric. Narrative statements describe water quality requirements in general terms, while numeric standards impose limits for specific physical, chemical, and biological characteristics of water.

Water quality needs are defined through the monitoring, assessment, and planning activities, carried out under the requirements contained in Section 305 of the Clean Water Act (CWA), Sections 303(d), 303(e) and 319 of the same statute, and the State Water Control Law. Section 3.6 of this document contains more information on Virginia's water quality standards.

2.2.2 Water Quality Monitoring

Water quality monitoring activities provide the chemical, physical and biological data needed to assess the present quality of the state's waters and to identify sources of pollution. The DEQ monitors a variety of water bodies ranging from small mountain streams to large tidally influenced rivers. DEQ maintains both ambient water and biological monitoring stations. At all monitoring stations, data is collected for standard parameters, such as dissolved oxygen, pH, and temperature, fecal coliform and nutrients. At some stations, supplemental waterbody specific data, such as biological or benthic data, are also collected.

DEQ is responsible for providing ambient water quality data for all of the Commonwealth's water resources management programs (which are divided among several state agencies). These water quality management programs use the data in various ways to assess the water quality and to verify the results of water quality management activities. After the data is assessed, the role of each station is adjusted to reflect the changing needs of the data

Table 2.2. List of Virginia Regulations and Programs on Water Quality Planning and Management

Regulation /Program /Activities	Description of Regulation/Program/Activities	Implementing Agencies
Virginia Pollutant Discharge Elimination System Permit Regulation		DEQ
Virginia Pollution Abatement Permit Regulation	\wedge	DEQ
Virginia Water Protection Permit Regulation		DEQ
Virginia Water Quality Standards		DEQ
Virginia Coastal Resources Management program		DEQ DCR VMRC DGIF VDH
Water Quality Improvement Fund		DEQ DCR
Solid Waste Regulations		DEQ
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Table 2.2. List of Virginia Regulations and Programs on Water Quality Planning and Management

Regulation /Program /Activities	Description of Regulation/Program/Activities	Implementing Agencies
Chesapeake Bay Preservation Area Designation and Management Regulation		CBLAD
Chesapeake Bay Program (Tributary Strategies)	\wedge	DEQ, DCR, CBLAD
Virginia Stormwater Management Regulations		DCR, CBLAD
Virginia Erosion and Sediment Control Regulations		DCR, SWCB
Virginia Agricultural Best Management Practices Cost Share Program		DCR, VDACS
Nutrient Management Program (Nutrient Management Training & Certification Program)		DCR CBLAD

Table 2.2. List of Virginia Regulations and Programs on Water Quality Planning and Management (continued)

Regulation /Program /Activities	Description of Regulation/Program/Activities	Implementing Agencies
Coastal Nonpoint Source Pollution Control Program		DCR, CBLAD, DEQ
Virginia Sewerage Regulation		VDH, DEQ
Virginia Source Water Assessment Program	\wedge	VDH
Alternative Discharging Sewage Treatment Regulation for Single Family Dwellings		VDH DEQ
Forestry Best Management Practices for Water Quality in Virginia		DOF
Submerged Lands and Tidal Wetlands Permit Program and the Local Wetlands Board Permit Program		VMRC

users (e.g., once a water quality planner assesses the data from a site and declares the site impaired, other information is needed from that site to begin determining the cause, extent, and severity of impairment and how it can be mitigated). The adjustment of the station is included in the revision to the yearly monitoring plan and the processes continues for the next assessment cycle.

During the 1998 assessment period, the Ambient Water Quality Monitoring Program included 1,620 monitoring stations. Of these stations, 83 percent were sampled for chemical and physical parameters, and the remaining stations were used for biological monitoring.

As part of the federal-interstate Chesapeake Bay Program, Virginia is engaged in extensive water quality monitoring of the Bay and its major tributaries. A monitoring subcommittee coordinates similar monitoring programs in other Bay states. This allows for baywide assessments of conditions, trend analysis and modeling efforts. More information on the Chesapeake Bay Program may be obtained from the DEQ Office of Chesapeake Bay Program.

For more information on statewide monitoring, see Virginia's Statewide Monitoring Strategy listed in Appendix 4.2.

2.2.3 Water Quality Assessment

The results of the assessments done on the monitoring stations are reported in the biennial Report to Congress required by Section 305(b) of the CWA. The data is also used in the development of the 303(d) list required by the CWA. Since the assessment began in the mid 1970's, a two-year window has been used for data assessment. The EPA and the Virginia Water Quality Monitoring, Information and Restoration Act (WQMIRA) have extended the assessment period to include five years of data starting with the 1998 report. Virginia will continue the development of the 305(b) report and the 303(d) list on a two-year cycle, but will assess five years of data per cycle. Virginia's 305(b) report is includes both point and nonpoint sources and is jointly prepared by DEQ and DCR.

Through the Water Quality Improvement Act (WQIA), the Commonwealth has established in the state treasury a special permanent nonreverting fund, known as the "Virginia Water Quality Improvement Fund." The Act directs DEQ to assist local governments, businesses, and individuals in reducing point source nutrient loading to the Chesapeake Bay with technical and financial assistance through grants provided by the fund. Likewise, the Act directs the DCR to provide similar assistance to local governments, Soil and Water Conservation Districts, other groups, and individuals in efforts to control nonpoint source pollution.

WQIA also requires DCR, in conjunction with other state agencies, to evaluate and report on the impacts of nonpoint source pollution on water quality to the Governor and the General Assembly. The evaluation, shall, at a minimum, include considerations of water quality standards, fishing bans, shellfish contamination, aquatic life monitoring, sediment sampling, fish tissue sampling and human health standards.

The water quality assessment activities also identify water quality limited segments still requiring wasteload allocations, load allocations, and total maximum daily loads (WLAs/Las/TMDLs). Section 303(d) of the CWA requires states to prepare a listing of such segments, establish a priority ranking, and establish WLAs/Las/TMDLs for all the identified water quality segments according to the priority ranking. The state is required to submit to the EPA for approval, the 303(d) list and the subsequent WLAs/Las/TMDLs once they are established.

The staff uses the 305(b) report, the 303(d) list, and other assessment of water quality in developing and updating the state water quality management plans (WQMPs). The plans contain analyses and management decisions on controlling specific sources of pollution identified in the assessment. The plans also recommend control measures and strategies needed to attain the goals established in the state's water quality standards.

2.2.4 Water Quality Management Plans (WQMPs)

Virginia's WQMPs consist of initials plans produced in accordance with sections 208 and 303(e) of the CWA and approved updates to these plans. With recent emphasis on controlling nonpoint sources of pollution, Virginia has produced other types of water quality plans and reports. These plans include the Watershed Restoration Action Strategies (WRAs), the Coastal Zone Act Reauthorization Amendments (CZARA) coastal zone plans, the Source Water Assessment Program (SWAP) reports and others.

Currently, Virginia has a total of 18 water quality management plans developed under sections 208 and 303(e). Many of these plans, listed in Table 2.4, are outdated and efforts are underway to update them. The updated plans will serve as repository of all TMDLs that have been approved by EPA and adopted by the Board.

The 305(b) Report, the 303(d) List and other assessment of water quality are used as the bases for developing and updating the state•s 303(e) Water Quality Management Plans (WQMPs). The plans contain analyses and management decisions on controlling specific sources of pollution identified in the assessment process. The plans also recommend control measures and strategies needed to attain the goals established in the state•s water quality standards.

2.2.5 Control Measures and Management Strategies

The control measures and strategies identified in the water quality management plans are implemented by issuing discharge permits and building or upgrading wastewater treatment works for controlling point source discharges, and instituting best management practices for controlling nonpoint sources of pollution. Periodic assessment of water quality through monitoring helps determine the effectiveness of the control measures in meeting water quality standards.

The DEQ has the responsibility of controlling point sources of pollution through the Table 2.4. Existing Water Quality Management Plans (WQMP's)

12/74
3/77; 3/83; 3/86
2/1992
2/1992
4/77; 2/88
7/77
6/77; 8/79; 2/92
12/78; 7/80
1/84; 5/87
2/78; 5/82
12/79
5/80
6/80; 10/84
11/80
12/80
6/82; 3/89; 7/89
6/83; 3/89
6/75

issuance of permits. The CWA established the National Pollutant Discharge Elimination system (NPDES) permit program to limit pollutant discharges into surface waters. DEQ administers the program in Virginia and calls it the Virginia Pollutant Discharge Elimination System (VPDES) permit program.

Any person, industrial facility, or institution that discharges or proposes to discharge

wastewater into surface waters of the Commonwealth from any pipe or ditch, included stormwater discharges from certain industrial facilities and from certain stormwater collection systems must apply to DEQ for a VPDES permit. VPDES permits limit the concentrations and quantities of pollutant, require proper operation and maintenance of treatment facilities, monitoring of discharge, and reporting of data to DEQ. One exception to the VPDES permit issuance is in the case of discharges from surface coal mines, where the DMME issues and enforces NPDES permits (as opposed to DEQ's VPDES permits). The DMME also issues and enforces nonpoint source operations and reclamation requirements on coal and mineral mines, and on gas and oil exploration and production sites.

BMPs are methods, measures or practices designed to prevent or reduce the pollution of state waters. BMPs include treatment requirements, operating and maintenance procedures, schedule of activities, prohibition of activities, and other management practices to control site runoff, spillage, leaks, sludge or drainage from raw material storage.

Through a combination of education, technical assistance, and financial incentives, the Department of Conservation and Recreation (DCR) promotes conservation practices, which reduce agricultural runoff. The DCR also works with landowners and local governments to reduce nonpoint source pollution from urban areas.

In accordance with Section 319 of the CWA, DCR prepares a statewide nonpoint source management plan consisting of two documents -- the Nonpoint Source Watershed Assessment Report and the Nonpoint Source Management Program Implementation Report. Copies of these reports may be obtained from the DCR (see address and phone number listed in Appendix 4.1).

In 1987, Virginia joined the other Chesapeake program participants in committing to reduce the controllable flow of nutrients into the Bay by 40 percent by the year 2000. Since each tributary to the Bay has different characteristics, each requires site-specific clean-up strategies. Virginia has committed to develop and implement tributary-specific strategies for each of the Bay's major tributaries. These strategies are designed to meet the main-stem nutrient reduction goals, achieve the water quality requirements necessary to restore living resources in both the main stem of the Bay and its tributaries, incorporate public participation in the strategy process, and advance cost-effectiveness and equity. Tributary Strategies for the major tributaries to the Chesapeake Bay. Virginia's strategy for the Potomac River basin is complete. Other tributary strategy studies are underway for the Rappahannock, James and York Rivers.

Under the President's Clean Water Action Initiative, Virginia has developed Watershed Restoration Action Strategies (WRAS) to effectively address water quality and resource protection issues. In developing watershed strategies, Virginia will seek opportunities to closely coordinate basin and watershed-level strategies by identifying and tracking implementation efforts that help meet watershed and basinwide water quality goals. The tributary strategies described in the preceding paragraph fulfill the role of WRAS, for all of Virginia's Chesapeake Bay tributaries. Basinwide WRAS will be developed for Virginia's Southern Rivers through the Watershed Conservation Round Table process and the water quality management planning process. As with the Bay Tributary strategy process, WRAS development in the Southern Rivers will involve extensive stakeholder and local government participation. For more information on WRAS development, contact DCR at the address listed in Appendix 4.1.

The Chesapeake Bay Preservation Act (CBPA), enacted in 1988, established a cooperative program between state and local governments aimed at reducing nonpoint source pollution. The Chesapeake Bay Local Assistance Department (CBLAD) protects the Chesapeake Bay and its tributaries from pollution by working in partnership with local governments to implement programs that protect and improve water quality, while supporting a healthy economy. CBLAD is required by law to implement mandatory land use bay preservation regulations in 84 localities. The Department also provides technical assistance to Tidewater localities regarding the regulations and requirements of the Chesapeake Bay Preservation Act (CBPA).

The Department of Forestry (DOF) is the lead agency for the implementation of forestry nonpoint source programs. DOF's nonpoint source programs stress voluntary best management practices (BMPs) to achieve sediment reduction and other nonpoint source pollution goals. The Virginia Silvicultural Water Quality Law which gives DOF enforcement authority to require corrective actions to protect state waters complements this BMP program.

The Virginia Marine Resources Commission (VMRC) is responsible for managing the use of Virginia's submerged land, tidal wetlands, and coastal primary sand dunes. These programs protect critical coastal resources and are core components of Virginia's Coastal Resource Management Program (VCRMP). Through technical assistance and permit approval, VMRC protects coastal water quality and habitat.

The VCRMP, administered by DEQ, is a network of environmental programs, which manage critical coastal resources. The Virginia Nonpoint Source Program, administered by DCR, is another core component of the VCRMP.

The Virginia Department of Agriculture and Consumer Services (VDACS) implements the Agricultural Stewardship Act (ASA) which addresses nutrients, sediments and toxics. ASA provides a common-sense solution to water pollution problems caused by agricultural operations. Complaints regarding agricultural operations, directed to the Commissioner of VDACS, are investigated to determine whether or not they are causing or will cause water pollution. If no causal link is found, the Commissioner will dismiss the complaint. If the investigation determines that the activity is the cause, the farmer is required to develop and implement a corrective plan to eliminate the pollution. Failure to correct the problem will result in enforcement action. VDACS also administers the Virginia Pesticide Control Act. Under the authority of this Act, regulatory and voluntary programs have been developed to control the use, handling and storage of pesticides so that toxics are prevented from entering surface and ground waters.

2.2.6 Enforcement

Compliance with water quality requirements must be enforced. DEQ's Office of Enforcement Coordination enforces limits and conditions included in VPDES permits, and other provisions of the CWA and the State Water Control Law. Many of the nonpoint source management programs are voluntary; regulatory programs, such as those implementing the Erosion and Sedimentation Control Law and the Chesapeake Bay Preservation Act are enforced

through local ordinances.

2.2.5 Public Participation

Public participation is an integral part of the continuing planning process in Virginia, as indicated in Figure 1. The CPP is a cooperative effort by all state agencies (see Table 2.2) involved in water quality management planning. Many of the components of the CPP, especially the regulatory programs (e.g., the permitting process) have gone through public participation during the regulatory adoption process.

The Virginia Administrative Process Act (APA) ensures that the public is afforded opportunity to participate in the development of regulations and adequate notice is provided of any hearings about a proposed or amended regulation. All state agencies with programs under the CPP have their own agency public participation process, in addition to the APA process.

Public input is solicited during the listing of impaired water [Section 303(d) list] and during the development of Total Maximum daily Loads (TMDLs). Comments are solicited through public notices published in the Virginia Register and in major newspapers across the state. Detailed public participation procedures for TMDL development is described in DEQ Guidance on Public Participation Process for TMDLs, listed in Appendix 4.2. For WQMPs development, public input is obtained through establishment of advisory committees and through public meetings. Additionally, processing of VPDES permits has its own public participation process. Development or revisions of water quality standards also go through an extensive public participation process as provided for in the APA and the Board • s Public Participation Guidelines.

Notice of the availability of the draft CPP will be published in the Virginia Register and comments from the public will be solicited. The document will not go through the APA process since it is not a regulation. Future updates of the CPP will also be public noticed in the Virginia Register.

3.0 REQUIRED ELEMENTS OF THE CPP

3.1 Development of Effluent Limits and Schedule of Compliance

The DEQ staff reviews and evaluates complete VPDES permit applications and applies appropriate guidelines and standards in establishing permit limits. Effluent limitations are restrictions imposed by the DEQ on quantities, discharge rates and concentrations of pollutants discharged from point sources into state waters. Permit application information evaluated by the staff include facility

location, facility operation (processes and products), wastewater treatment, and wastewater analysis. An inspection of proposed or existing discharge sites is also made to aid in development of permit limits.

The staff establishes permit effluent limitations, standards, or conditions according to all applicable Effluent Limitation Guidelines (ELG) promulgated by the Environmental Protection Agency, Water Quality Standards (WQS), Best Professional Judgments (BPJ) and Best Engineering Judgments (BEJ). ELG are regulations published by the EPA under Section 304(b) of the CWA to adopt or revise effluent limitations.

Applications are also reviewed to determine if the proposed discharge contains significant toxic pollutants. If toxicity or potential toxicity problems are determined to exist, the facility may be included in a program to remove or reduce toxics.

For industrial discharges, the staff ensures that the application is classified according to the standard industrial classification so that appropriate effluent limitation guidelines can be applied, if necessary. For publicly owned treatment works permit, the application is reviewed for the need for possible pretreatment requirements.

The DMME issues both the Coal Surface Mining Operation (CSMO) permit and the National Pollutant Discharge Elimination (NPDES) permit for industrial discharges from coal mining operations in Virginia. The CSMO permit is issued in accordance with the Virginia Coal Surface Mining Control and Reclamation Act (SMCRA). The NPDES permit is issued in accordance with the CWA. DMME usually issues a joint CSMO/NPDES permit. This permit combines the NPDES program's effluent limitations with SMCRA's protection of the hydrologic balance. This provides mine operators and citizens with the efficiency and consistency of one-stop permitting and optimizes use of state resources needed for monitoring, reporting, tracking, and enforcing. The U. S. Office of Surface Mining (OSM) and the EPA maintain an oversight role over this program. The DEQ maintains the right to review and comment on the NPDES permits and to assert its enforcement authority and take emergency actions.

Whenever an effluent guideline applies, the level of control prescribed by the guideline represents the minimum level of control required in the permit. Permits will often have limitations on individual parameters developed by different means, and occasionally, the limitations on a single parameter will be derived through a combination of methods.

Many situations require the development of effluent limitations according to water quality considerations. Water quality-based requirements are included in all permits where it is known or expected that water quality will not meet applicable water quality standards, even after application of technology-based effluent limitations. Water quality-based limits are usually established by using water quality models. The Reference section includes the Modeling Procedures Manual that contains the water quality model for free-flowing streams and detailed procedures for developing effluent limitations based on water quality standards for toxics. For waters that cannot be modeled, best professional judgement is used.

Detailed information on VPDES permit processing, including development of effluent limits can be found in the DEQ VPDES Permit manual included in the list of References and Support Documents. The manual includes all the Guidance Documents that DEQ has developed relating to permit processing.

The process for determining limits for multiple dischargers covered by a TMDL is described in the Guidance for Development of TMDLs, which is included in the list of References.

Schedules of Compliance

Schedules of compliance are issued to allow permittees to construct treatment systems needed to meet permit limits. Schedules of compliance are also sometimes required when permit limits have been violated and correction of the problems causing the violation cannot be effected within a short time. Generally, discussions with the permit holder are undertaken to determine the actions and deadlines required for a return to compliance.

Compliance schedules may be incorporated into consent orders issued by the Board. If a compliance schedule cannot be developed through discussion, the Board may issue a Special Order requiring the permit holder to undertake the actions needed to correct violations; a Special Order does not require the consent of the permittee.

If a permit holder fails to meet the conditions of an order issued by the Board, the case is referred to the Office of the Attorney General for action. When the case is resolved, compliance schedules may be included in a resulting Consent Decree or Court Order.

Compliance schedules are also required when new water quality-based effluent limits are established which require additional treatment technology than can be achieved within a permit cycle.

3.2 Incorporating Sections 208 and 209 Plans

Of the seven originally designated (in 1974) areawide 208 planning agencies, six have completed 208 plans. These plans were developed from the mid-1970 to late 1980's. Many of these plans have become outdated or have been incorporated in section 303(e) plans. In some cases, the 208 plans became the water quality management plan for a particular basin. In other cases, only pertinent portions of a •208 plan have been incorporated in a water quality management plan.

Table 2.4 lists all 303(e) and 208 plans that have been adopted by the Board. Section 208 plans are no longer being developed in Virginia. Local water quality management planning is still being done by many localities, often as part of their comprehensive planning efforts.

No Section 209 Level B basin plans have been developed in Virginia.

3.3 Developing TMDLs and Water Quality-based Effluent Limits

Each VPDES permit application is reviewed to determine if an existing water quality management plan should be used in evaluating the facility, treatment processes and discharge proposed. If an applicable plan exists, effluent limits are determined based on the requirements of the plan. Water quality limited segments receive special considerations and permit limits are often developed in the context of wasteload allocation.

Water quality segments were initially identified during the preparation of WQMPs during the 1970's. Ongoing evaluations of their condition and identification of other stream segments requiring special considerations are part of the 305(b) water quality assessment process.

Many situations require the development of effluent limitations according to water quality considerations. Site-specific limits, more stringent than effluent limitation guidelines, are developed if needed to protect the quality of receiving waters. Effluent limitations are established by employing appropriate water quality modeling procedures. The process for determining water quality-based effluent limits are detailed in the VPDES Permit Manual, listed in the Reference Section.

Procedures for assessing segments to be included in the 303(d) TMDL priority listing are detailed in DEQ's Water Assessment Guidance manual for 305(b) Water Quality Report and 303(d) TMDL Priority List Report. The guidance manual is listed in the Reference section and is available from DEQ.

Wasteload allocation (WLA) is the portion of a receiving water's loading capacity allocated to one of its existing or future point sources of pollution. Stream capacity not allocated to point source discharges includes natural stream background conditions and the nonpoint source load. The sum of the individual WLAs for point sources, load allocation (LA) for nonpoint sources and natural background, plus a factor of safety, equals the total maximum daily load (TMDL).

Natural background conditions, nonpoint source loads, point source allocations, and a margin of safety could theoretically be calculated separately. However, the resources required to do so are considerable, particularly any effort to separate natural background conditions and nonpoint source loads. Therefore, values for many of these components are assumed when water quality models are applied. For details of the modeling procedures used by the DEQ, refer to the DEQ Modeling Procedures Manual listed in the Reference section of this document.

Procedures for developing TMDLs are detailed in the DEQ Guidance Memorandum for Development of TMDL. Public participation process for TMDL development is detailed in a separate paper. Both documents are listed in the Reference section.

The establishment of TMDLs will conform to the short term and long-term goals as established in the Memorandum of Understanding between Virginia and the EPA regarding Section 303(d) and 305(b) of the CWA.

More studies and investigations on the specific cause(s) of the nonpoint source impairments will be undertaken as resources will allow. The Department of Conservation and Recreation (DCR) , will develop nonpoint source related TMDLs. Where both point and nonpoint sources are present, DEQ and DCR will work together to develop the TMDL according to the written agreement between DEQ and DCR on TMDL development. This Agreement is listed in the Reference section.

All TMDLs developed for impaired waters due to point and/or nonpoint sources of pollution will be catalogued in the updated 303(e) Water Quality Management Plans.

3.4 Updating and Maintaining WQMPs

Over the past several years, the Board has developed water quality management plans in accordance with • • 208 and 303(e) of the CWA. These planning efforts resulted in river basin WQMPs listed in Table 2.4. Many of these plans have been amended and updated to reflect current conditions; however, others have now become outdated. Figure 3.4 shows the delineation of the major river basins

in Virginia.

Since the WQMPs draw upon the 303(b) report and 303(d) list, updates of the plans will follow the publication schedule of these two documents, which is currently every two years. Normally, plan updates will take place every two years; however, a more frequent schedule may be necessary to address permitting or other urgent issues. The updated plans will address problems identified in these two documents. New permits issued or TMDLs developed, and all changes to existing permits and TMDLs since the last update, will also be reflected in the updated plan.

The updated WQMPs will focus on the priority water quality issues identified in the latest 305(b) and 303(d) reports. The plans will contain strategies to be implemented to achieve water quality goals and will address both point and nonpoint sources of pollution. The plans will also serve as repository of all EPA-approved and Board-adopted TMDLs and will include lists of VPDES permits and water quality limited segments.

The DEQ is developing guidance procedures for updating and maintaining WQMP's. Upon completion the manual will be made part of the CPP and will included as one of the technical support documents.

Future efforts to update the CPP will include a staff level interagency work group to ensure maximum coordination.

The update process will involve public participation through advisory groups and public meetings. Notice of development of plan updates will be published in the Virginia Register, and updates will be developed in cooperation with relevant state agencies. The Advisory Committee will review drafts and the Board will adopt the final plan.

Figure 3.4 Major River Basins in Virginia

Currently DEQ is investigating different alternatives on the most efficient way to update the plans that will provide for full public participation and yet avoid unnecessary delays inherent in the state APA process. Once the procedures are completed, a schedule for updating the plans will be established. The CPP document will then be updated to incorporate the procedures and the schedules for updating the plans. The updated plans will be submitted to the EPA in accordance with federal regulations. The DEQ Central Office will coordinate the update process, with the DEQ addressing point sources and DCR the nonpoint sources.

DEQ hopes to complete the updates within five to seven years. Due to the organizational structure of DEQ (central office and six regional offices) scheduling of the updates will have to consider distribution of the load so as not to adversely affect other regional priorities. It is envisioned that the first plans to be updated are the Upper James-Jackson River plan, Tennessee-Big Sandy plan, and development of a new Rappahannock River Basin plan.

Any changes in a VPDES permit or a WQMP that could result in a conflict between the plan and the permit will be resolved and reflected in both documents. Changes to either the VPDES permit or the WQMP need to go through the DEQ•s public participation process.

3.5 Authority for Intergovernmental Cooperation

The Commonwealth Secretary of Natural Resources is responsible for providing overall policy guidance to those state agencies responsible for environmental protection.

The DEQ works with many other state agencies to assure proper implementation of programs and regulatory efforts to manage, protect and improve water quality. The DEQ and the Virginia Department of Health (VDH) are required by law or regulation to carry out certain activities jointly, including implementation of sewerage regulation and review of plans, specifications and permits for treatment works.

The Watershed Planning and Permitting Coordination Task Force (WPPCTF) is charged with promoting and coordinating watershed planning and permitting activities within the Commonwealth. The Task Force is composed of the DEQ, DCR, DOF, DMME, CBLAD, VDACS, and VDH. Each member agency, as well as other state agencies, implement watershed programs which are critical to water quality protection. The Task Force member agencies have contributed to the information contained in this CPP document.

Other agencies cooperating with DEQ include the Department of Game and Inland Fisheries (DGIF), the Virginia Institute of Marine Science, the Virginia Marine Resources Commission.

The DEQ also has Memoranda of Agreement or Understanding with many other state and federal agencies. All applicable memoranda of Agreement/Understanding are listed in the Reference section. Development and implementation of Best Management Practices to control nonpoint sources of pollution are undertaken in cooperation with the DCR and the Department of Forestry. The CBLAD requires local government and farmers to implement BMPs.

At the substate level, the agency maintains cooperative and often binding relationships with political subdivisions of the state through the VPDES permit program and through the requirements and provisions of Sections 205(j), 208, 303, 305, 319, and 604(b) of the CWA.

The agency is also involved in many interstate, multi-jurisdictional water quality management activities. It maintains membership in the Interstate Commission on the Potomac River Basin and the Ohio River Valley Water Sanitation Commission, and the Association of State and Interstate Water Pollution Control Administrators. These affiliations and other mechanisms (such as notification provided to and by Kentucky, Tennessee, North Carolina, Maryland, and West Virginia regarding permit application) allow achievement of interstate cooperation and coordination for water quality management.

The DEQ is participating in the current federal, state, local and private sector efforts to clean up and restore the Chesapeake Bay, and is a member of the Chesapeake Bay Commission and the Chesapeake Bay Executive Council.

Section 2.2 provides additional information on the role of other agencies in the continuing planning process.

3.6 Establishing and Implementing Water Quality Standards

Existing water quality standards are routinely reviewed to ensure compliance with state and federal laws and regulations. Specific identification of the need for new or revised standards is based on one or more of the following:

- Changes in federal or state laws or regulation.
- EPA requirements to meet existing federal laws and regulations.
- Availability of new information from the EPA or other sources concerning standards.
- Recognized water quality problems requiring revisions to the water quality standards to be properly addressed.
- Input from citizens, public interest groups or agency staff regarding the need for specific standards revisions.

The standards to be reviewed or established are ranked based on need for development. During the triennial review process, the Water Quality Standards publication is reviewed and revised to incorporate any necessary additions and modifications.

The process for developing a revised or new standard includes the following:

- Throughout the process, comply with all State laws, regulations and Governor's Executive Orders to adopt the standard (including Administrative Process Act and Public Participation Guidelines).
- Review all data to develop the standards (using water quality data, technical literature, scientific data, EPA information, guidance and regulation, approaches taken by other states, and agency needs). May include formation of task forces/committees from intra agency, interagency, and outside sources depending on expertise required and available.

- Prepare a draft version of standard based on analysis of available data, economic impact, and implementation strategies.
- Solicit public input in accordance with the State APA process and the Public participation Guidelines. Draft is sent to the EPA for comment.
- Present recommended draft standard to the Board for authorization to go to public hearing.
- After Board authorization, begin process of adopting the standard in the manner required by state law and regulation (public notice, public hearing, etc.).
- The standard takes effect once the adoption process has been completed and the standard certified by the Attorney General s office as having been duly adopted.

Water quality standard implementation is carried out by its incorporation into water quality planning and assessment efforts. The standards are used as basis for calculating waste load allocations and TMDLs, which are in turn used in developing VPDES permit limits.

3.7 Control of Residual Waste from Water Treatment

The disposition of residual waste from water treatment process is controlled by the issuance of a VPDES permit for a point source discharge to surface waters. Management of the residuals is included as special condition in the permit issued.

3.8 Construction Needs for Waste Treatment Works

The 1986 General Assembly created the Virginia Water Facilities Revolving Loan Fund to facilitate self sufficiency for wastewater financing at the state and local levels and to provide needed financial assistance to localities to meet water quality objectives and mandates. The CWA of 1987 established the State Water Pollution Control Revolving Fund under which federal grants are awarded to states for deposit in the State's Revolving Loan Fund (SRF).

Virginia agreed to satisfy a 20% match requirement on all federal funds received under the SRF program. The General Assembly has appropriated \$60 million to the program since 1986. These funds, with Federal Capitalization grants, have provided more than \$400 million to the program.

Each year as state and federal funds are made available, the Board solicits loan application from communities for needed wastewater treatment improvements. Money from the Fund is lent to localities for:

- Any expansion, upgrade, extension, replacement, repairs, rehabilitation, and/or additions to publicly owned waste treatment plants.
- Any needed new facility or new conveyance system.
- Any planning and/or design cost associated with the above.

Projects are evaluated for financial assistance based on water quality need, environmental concerns, fiscal stress, readiness to proceed, and the availability of funds. Interest rates and repayment terms are established based on the financial condition of the individual locality. All principal and interest are repaid into the Fund and the money is then reloaned for additional projects.

The process for determining project eligibility and annual priority and funding distribution for the state revolving loan fund is outlined in the Revolving Loan Fund Program Design Manual. The Manual is listed in the Reference section.

3.9 Determining the Priority of Permit Issuance

Timely issuance of VPDES permits is crucial to ensuring that appropriate effluent limits and other conditions are in force for each discharger. Applications for new permits are processed expeditiously, generally in order of receipt. State law requires that new permits be issued within 120 days of receipt of a complete application.

It is DEQ's goal to reissue all previously issued permits before expiration. Implementation of this policy is currently fostered by an automatic permit tracking system that prints a letter one (1) year before permit expiration, informing the permittee that they must file for reissuance of their permit no later than 180 days before the expiration of the permit.

More details on the processing of permits and the role of DEQ regional offices and EPA review can be found in the VPDES Permit Manual, listed in the Reference section.

4.0 APPENDICES

4.1 State CPP Implementing Agencies

Table 4.1 List of State CPP Implementing Agencies

AGENCY	ADDRESS	PHONE NO.	DIRECTOR
DEQ	629 E. Main St., Richmond, VA 23219	804/698-4000	Dennis Treacy
DCR	203 Governor Street., Ste. 302, Richmond, VA 23219	804/786-2123	David Brickley
CBLAD	805 E. Broad St., Ste 701, Richmond, VA 23219	804/225-3440	Michael Clower
DOF	900 Natural Resources Dr., Charlottesville, VA 22903	804/977-6555	James W. Garner, Jr.
DMME	202 N. Ninth St., 8 th Floor, Richmond, VA 23219	804/692-3200	O. Gene Dishner
VDACS	1100 Bank St., Washington Bldg., Richmond, VA 23219	804/786-3501	J. Carlton Courter, III (Commissioner)
VDH	1500 E. Main St., Main Street Sta., Richmond, VA 23219	804/786-5568	Eric H. Bartsch (Water Programs)
DGIF	4010 West Broad St., Richmond, VA 23230	804/367-9231	William L. Woodfin, Jr.
VMRC	2600 Washington Avenue Newport News, VA 23607	757/247-2200	William A. Pruitt (Commissioner)

4.2 References and Technical Support Documents

The following documents supplement and explain in detail some discussions included in the main body of the CPP document. Many of these documents are subject to regular updates. The list refers to either the original documents or the most recent updated or amended documents. These documents are available from the originating agency upon request.

Table 4.2. List of Technical Support Documents

ORIGINATING AGENCY	DOCUMENT TITLE
DEQ	Section 305(b) Water Quality Assessment Report – a summary of water quality conditions in Virginia submitted to the EPA and Congress every two years to satisfy the federal requirements under Section 305(b) of the CWA.
DEQ	Section 303(d) TMDLS Priority List – a report listing impaired waters of the state that were identified in the Section 305(b) report. This list is updated every two years.
DEQ	Virginia Water Quality Standards – a document listing the designated uses for waters of the state and water quality criteria for such waters based upon such uses.
DEQ	Water Quality Assessment Guidance Manual for 305(b) Water Quality Report and 303(d) TMDL Priority List Report – document detailing the procedures for assessment of water quality and determination of segments that need to go on the 303(d) list.
DEQ	DEQ Guidance on Development of TMDL – document describing detailed procedures to be followed in developing total maximum daily loads under varying conditions.
DEQ	DEQ Guidance on Public Participation Process for TMDL – document that describes the public participation process in the development and adoption of TMDLs.
DEQ	Existing Water Quality Management Plans – Eighteen existing water quality management plans developed in accordance with Sections 208 and 303(e) of the CWA.

Table 4.2. Technical Support Documents (continued)

ORIGINATING AGENCY	DOCUMENT TITLE
DEQ	VPDES Permit Regulation – Virginia regulation that delineates the procedures and requirements to be followed in connection with VPDES permits issued by the Board pursuant to the Clean Water Act and the State Water Control Law.
DEQ	VPDES Procedures Manual (July 1995 or latest edition) – describes the procedures DEQ use in reviewing permit applications, determining effluent limits, public participation and other processes involved in issuing VPDES permits.
DEQ	Modeling Procedures Manual – A Manual that describes the procedures used by staff to develop water quality based effluent limitations and wasteload allocations.
DEQ	Revolving Loan Fund Program Design Manual - A brief summary of the requirements of the Virginia Revolving Loan Fund program as they relate to loan recipients. The Manual describes the procedures and criteria in developing loan priority funding list for construction of waste treatment works.
DCR	Virginia Nonpoint Source (NPS) Management Program – describes Virginia's NPS management program. It guides and directs federal, state, and local actions, funding and public participation.
DCR	Virginia Erosion and Sediment Control Handbook
DCR	Virginia Nonpoint Source Management Program Implementation Report
DCR	Virginia Nonpoint Source Pollution Watershed Assessment Report

Table 4.2. Technical Support Documents (continued)

ORIGINATING AGENCY	DOCUMENT TITLE
DCR	Coastal Nonpoint Source Pollution Control program Submittal
	Water Quality Improvement Fund Guidance
CBLAD	Water Quality Improvement Fund Guidance
DOF	Forestry Best Management Handbook (1997, or later) – describes proper best management practices to use, its specific purpose, and technical specifications for installation of these practices on Virginia's forest land.
VDH	Virginia Source Water Assessment Program - describes Virginia's strategic approach to conducting source water assessments including Virginia's criteria for delineating boundaries of the source water assessment areas. Also describes public participation process in the development of SWAP and how the results of assessments will be made available to the public.
VDH	Virginia Drinking Water State Revolving Fund Program Design Manual – describes the funding opportunities available through the Drinking Water State Revolving Fund Program. Includes types of financial assistance available, eligibility requirements and application packages.

- 4.3 Miscellaneous Memoranda of Agreement/Understanding Affecting Water Quality Management in Virginia
 - A. Memorandum of Understanding Between the Commonwealth of Virginia and the U. S. EPA, Region III regarding Sections 303(d) and 303(e) of the CWA
 - B. Memorandum of Understanding between the SWCB and the EPA for Administration of the National Pollutant Discharge Elimination System Permit Program in Virginia.
 - C. Agreement Between DEQ and DCR on TMDL Development
 - D. Memorandum of Understanding between DCR and SWCB with regard to the Administration of the Nonpoint Source Water Pollution Control Program.
 - E. Memorandum of Understanding Between the Virginia Department of Health and the Department of Environmental Quality for the Coordination of Efforts and the Resolution of Issues.
 - F. Memorandum of Understanding between the SWCB and the State Department of Health Regarding Shellfish Sanitation Coordination.
 - G. Memorandum of Understanding between the SWCB and the VDH on the Disposal of Solid Waste as it may affect Ground or Surface Waters.
 - H. Agreement between the Department of Environmental Quality and the Department of Mine, Minerals and Energy on TMDL Development Process.

4.4 Table 4.4. CPP Elements and Virginia Programs that Address Each Element

CPP Element	Programs/Activities that Address the CPP Element	Implementing Agencies
Process for developing effluent limitations and schedule of compliance at least as stringent as those required by sections 301(b)91) and (2), 306 and 307 and at least as stringent as any requirements contained in applicable water quality standards in effect under authority of section 303 of the CWA	VPDES permit program, water quality standards development and adoption, water quality modeling	DEQ
Process for Incorporating Sections 208 and 209 Plans	Water quality management planning process (development and update of WQMPs)	DEQ with input from relevant state agencies and local governments
Process for Developing Total Maximum Daily Loads and Water Quality Based Effluent Limitations	Water quality monitoring and assessment activities, 305(b) Report, 303(d) TMDL Priority List, VDPES permit program, nonpoint source pollution control programs	DEQ, DCR and other relevant state agencies

Table 4.4 CPP Elements and Virginia Programs that Address Each Element (continued)

CPP ELEMENT	Programs/Activities that Address the CPP Element	Implementing Agencies
Process for Updating and Maintaining Water Quality Management Plans	Water quality management planning process, water quality standards, 305(b) report, 303(d) List, nonpoint source pollution control programs, Virginia APA process, Virginia Coastal Zone Management programs	DEQ, DCR, CBLAD, VDH, PDC'S, DMME, and other relevant agencies
Process for assuring adequate authority for intergovernmental cooperation in the implementation of the State QWM programs	Existing state laws and regulations currently exist to support this activity; MOU's among agencies. Refer to Listing of State agencies water quality programs in the Appendix.	DEQ, DCR, CBLAD, VDH, VDACS, DOF, DMME, interstate basin commissions, PDC's and other relevant state agencies.
Process for establishing and assuring adequate implementation of new or revised water quality standards	Water quality standards development and implementation, water quality modeling	DEQ with input from relevant state agencies and the public
Process for assuring adequate controls over the disposition of all residual waste from any water treatment processing	VPDES permit program, VPA permit program	DEQ, VDH

Table 4.4 CPP Elements and Virginia Programs that Address Each Element (continued)

CPP ELEMENT	Programs/Activities that Address the CPP Element	Implementing Agencies
Process for developing an inventory and ranking of needs for construction of waste treatment works	VPDES permit program, Virginia Revolving Loan Fund program	DEQ
Process for determining the priority of permit issuance	VPDES permit program	DEQ

5.0 GLOSSARY

Board - the Virginia State Water Control Board (SWCB)

Nonpoint source - a source of pollution, such as a farm or forest land runoff, urban stormwater runoff, mine runoff, or salt water intrusion that is not collected for discharged as a point source.

Point source - any discernible, defined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, vessel or other floating craft, from which pollutants are or maybe discharged.

Total Maximum Daily Load (TMDL) - the sum of the individual wasteload allocation for point sources, load allocation for nonpoint sources, natural background loading and usually a safety factor. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

Virginia Pollutant Discharge Elimination System (VPDES) Permit -- a document issued by the Board authorizing, under prescribed conditions, the potential or actual discharge of pollutants from a point source to surface waters.

Water Quality Management Plan (WQMP) - a statewide or areawide waste treatment or management plan developed and updated in accordance with the applicable provisions of the CWA or the State Water Control Law.

Water quality standards - provisions of State or federal law that consist of a designated use or uses for the waters of the Commonwealth and water quality criteria for such waters based upon such uses. Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the State Water Control law and the federal CWA.

Mineral Resource Extraction - coal mining, mineral mining, and gas and oil exploration and production operations permitted under Title 45.1 of the Code of Virginia.

6.0 RECORD OF CPP DOCUMENT SUBMISSION TO EPA

Submitted:	COMMONWEALTH OF VIRGINIA	
Ву:		Date:
	Woodley, Jr. of Natural Resources	
Reviewed:	UNITED STATES ENVIRONMENTA	AL PROTECTION AGENCY
Ву:		Date:
	lichael McCabe	

W. Michael McCabe Regional Administrator U. S. EPA, Region III